Health Consultation

PULLMAN FACTORY
(a/k/a PULLMAN FACTORY SOIL SAMPLING)

CHICAGO, COOK COUNTY, ILLINOIS

CERCLIS NO. ILD981959208

APRIL 7, 1999

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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Prepared by:

Illinois Department of Public Health
Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

BACKGROUND AND STATEMENT OF ISSUES

The U.S. Environmental Protection Agency (USEPA) requested that the Illinois Department of Public Health (IDPH) evaluate the public health hazards posed by exposure to contaminants detected in the soil at the former Pullman Factory in Chicago, Cook County, Illinois. USEPA collected the surface soil samples during a site investigation in November 1994. In November 1998, USEPA requested this health consultation through the Agency for Toxic Substances and Disease Registry, which forwarded the request to IDPH.

The former Pullman Factory property, also called the Pullman Sewage Farm, is a 140-acre tract of land. It is bound on the north by 130th Street, on the east by St. Lawrence Avenue, on the south by 134th Street, and on the west by Indiana Avenue [1]. The Chicago and Western Indiana railroad runs north and south through the center of the property. The Little Calumet River is about 0.15 miles south and west of the Pullman property. Altgeld Gardens, a Chicago Housing Authority community of about 10,000 people, is across St. Lawrence Avenue, east of the site (Attachment 1).

The site was used for the disposal of untreated industrial and residential sewage from the early 1880s to about 1907. These wastes were mostly municipal sewage from the town of Pullman, about 3 miles north of the property. During that time, crops including onions, potatoes, cabbage, celery, and sweet corn were also grown on the property. Most of the former Pullman Factory property is now residential and includes the Golden Gate Subdivision, Concordia Park Apartments, and the Eden Green Cooperative. Golden Gate Park and Rosebud Farm Food Distributor are in the northeastern portion of the property [1].

The Illinois Environmental Protection Agency (Illinois EPA) evaluated the Pullman Factory property in 1987 and 1990. Illinois EPA found low levels of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, and inorganic chemicals in the site soil. USEPA conducted a site investigation and collected soil samples at the Pullman Factory property in January 1994. The purpose of the investigation was to learn if hazardous materials were present because of previous activity in the area. The investigation was limited to 23 soil samples; 18 samples were collected on the site, and 5 samples were collected from the nearby Altgeld Gardens area (Attachment 2). The samples were collected from various depths, but none of the samples were collected from the top 3 inches of soil. The top 3 inches is the depth that best characterizes the potential for human exposure. USEPA analyzed the samples for metals, VOCs, SVOCs, polychlorinated biphenyls, pesticides, and cyanide [1].

DISCUSSION

IDPH compared the results of each soil sample from the 1990 Illinois EPA sampling and the 1994 USEPA sampling with the appropriate comparison values used to select contaminants for further evaluation for carcinogenic and non-carcinogenic health effects. Chemicals found at levels greater than comparison values or those for which no comparison value exists were selected for further evaluation. A discussion of each comparison value used is found in Attachment 3.

IDPH assumed the levels detected in the samples were indicative of levels in the surface soil on the property. The levels of polycyclic aromatic hydrocarbons (PAHs) found in the soil on the site are within ranges typically found in urban areas and are not known to cause adverse health effects at these levels [2]. DDT, DDD, and DDE were found at levels greater than background in some on-site samples, but none of these exceeded comparison values and would not be expected to cause adverse health effects in persons exposed at these levels [3].

Sample SS20, collected from a nearby Altgeld Gardens courtyard, contained elevated levels of benzo(a)pyrene and chrysene at 9,000 and 12,000 parts per billion, respectively. Those levels are not expected to cause adverse health effects if people are exposed to soil containing those compounds. IDPH reviewed the data and determined that no apparent public health hazards exist as a result of exposure to the soil at this property [4].

CHILD HEALTH INITIATIVE

Children are especially sensitive to some contaminants. For that reason, IDPH always considers the public health implications of children who may be exposed to contaminants. No children were identified at this site who were exposed to contaminants at levels that would cause adverse health effects.

CONCLUSIONS

Based on the information reviewed, IDPH concludes that no apparent public health hazard exists from exposure to the soil contamination found at and near the Pullman Factory property in the 1990 Illinois EPA and 1994 USEPA site investigations.

RECOMMENDATIONS

No recommendations are necessary.

PREPARER OF REPORT

Ken Runkle
Environmental Toxicologist
Illinois Department of Public Health

REFERENCES

1. U.S. Environmental Protection Agency, Expanded Site Inspection Final Report, Pullman Factory, November 29, 1994.

2. Agency for Toxic Substances and Disease Registry, Toxicological Profile for Polycyclic Aromatic Hydrocarbons, December 1996.

3. Agency for Toxic Substances and Disease Registry, ATSDR Toxicological Profile for 4,4'-DDT, 4,4'-DDE, and 4,4'-DDD, December 1996.

4. Illinois Department of Public Health, Memorandum to Alan Altur, USEPA, October 12, 1994.

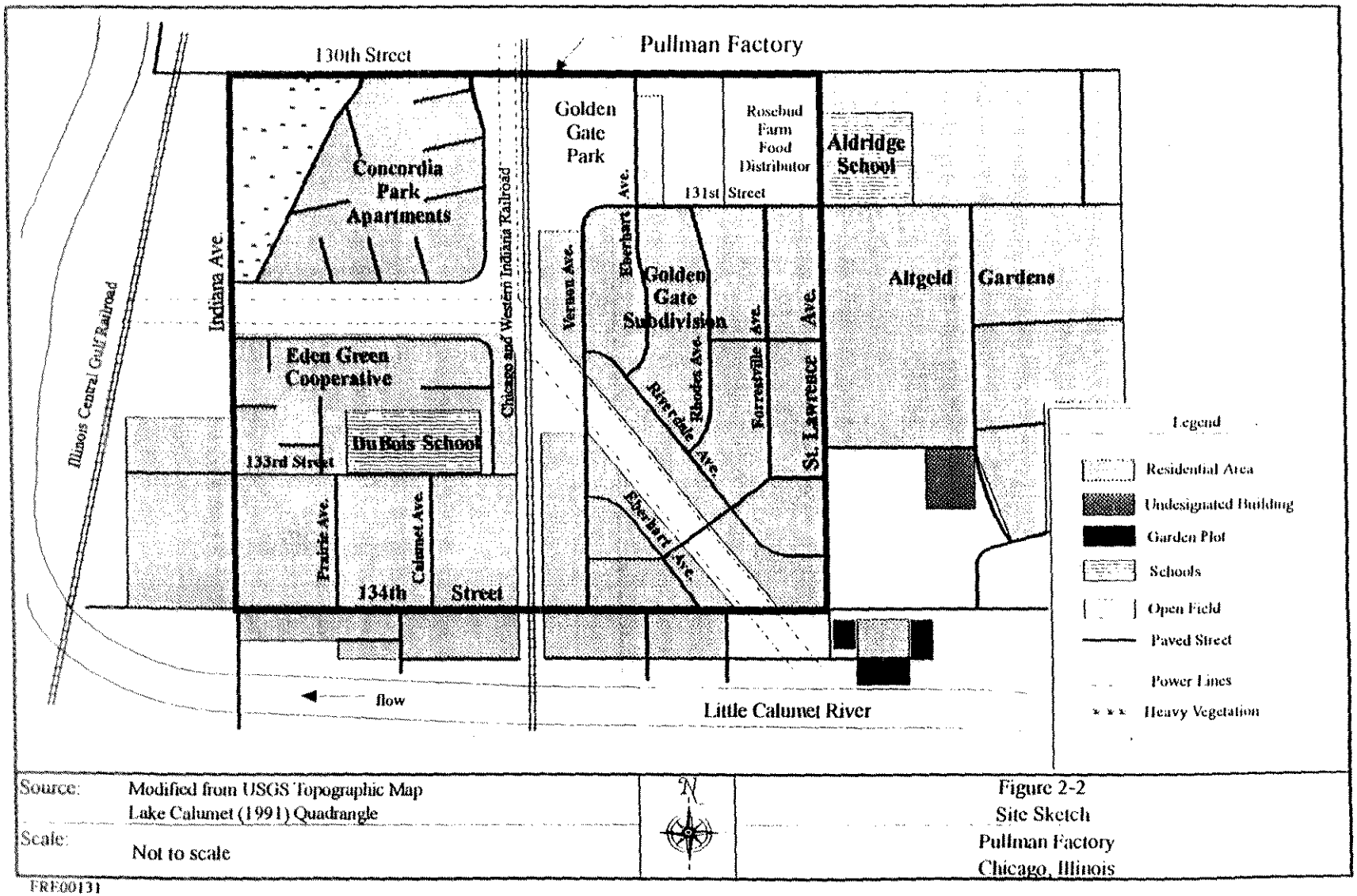
CERTIFICATION

This Pullman Factory Soil Sampling Site Health Consultation was prepared by the Illinois Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was begun.

Gail D. Godfrey
Technical Project Officer
Division of Health Assessment and Consultation
ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this health consultation and concurs with its findings.

Richard E. Gillig
Chief, State Programs Section
Division of Health Assessment and Consultation
ATSDR



Source: Modified from USGS Topographic Map
Lake Calumet (1991) Quadrangle

Scale: Not to scale

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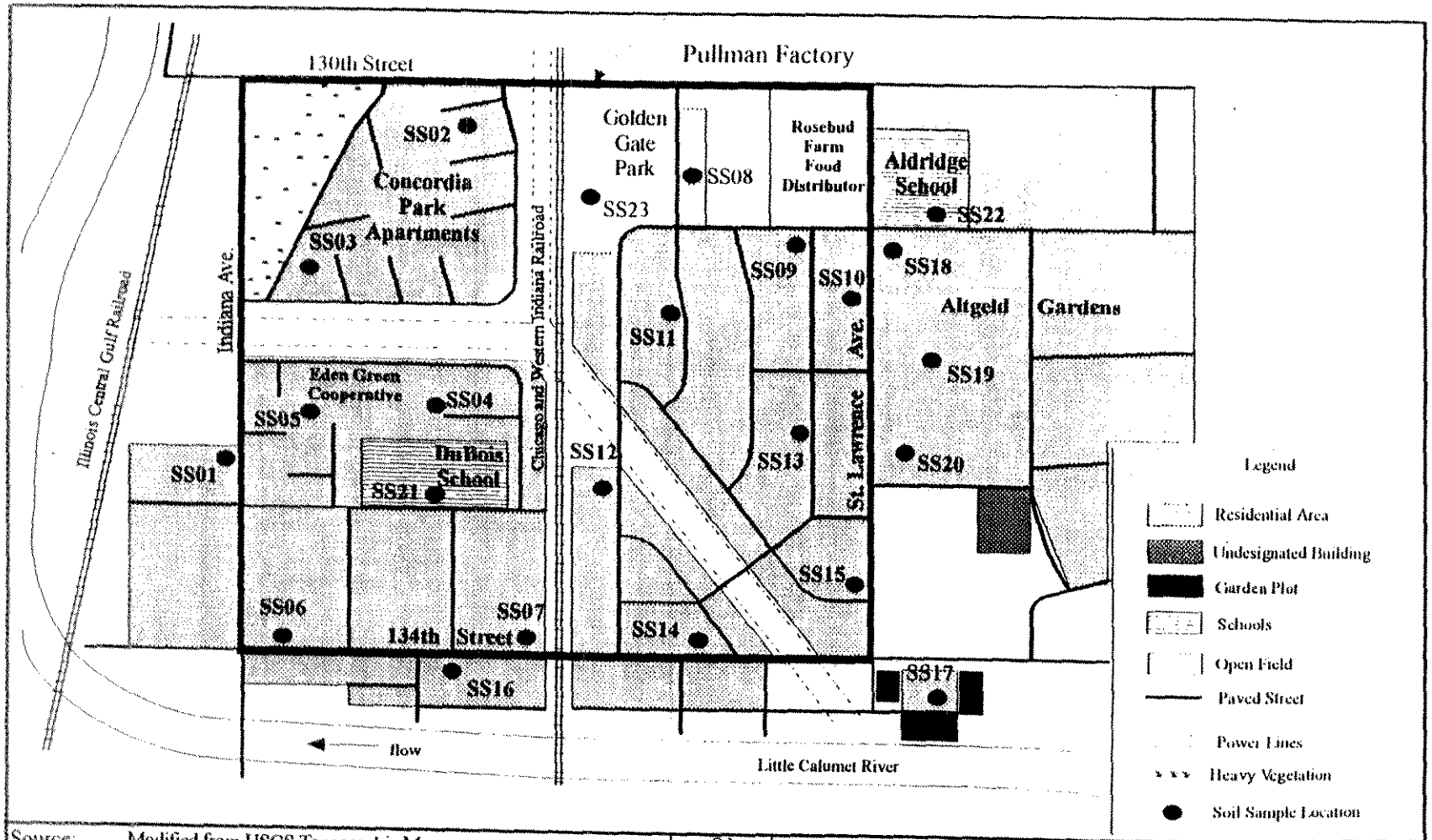
Figure 2-2
Site Sketch
Pullman Factory
Chicago, Illinois

FRE00131
9.27.94

ATTACHMENT 1



Source: Modified from USGS Topographic Map
Lake Calumet (1991) Quadrangle

Scale: Not to scale

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Figure 3-1
Sample Location Map
Pullman Factory
Chicago, Illinois

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ATTACHMENT 2

ATTACHMENT 3

Comparison Values Used in Screening Contaminants for Further Evaluation

Environmental Media Evaluation Guides (EMEGs) are developed for chemicals based on their toxicity, frequency of occurrence at National Priority List (NPL) sites, and potential for human exposure. They are derived to protect the most sensitive populations and are not action levels, but rather comparison values. They do not consider carcinogenic effects, chemical interactions, multiple route exposure, or other media-specific routes of exposure, and are very conservative concentration values designed to protect sensitive members of the population.

Reference Dose Media Evaluation Guides (RMEGs) are another type of comparison value derived to protect the most sensitive populations. They do not consider carcinogenic effects, chemical interactions, multiple route exposure, or other media-specific routes of exposure, and are very conservative concentration values designed to protect sensitive members of the population.

Cancer Risk Evaluation Guides (CREGs) are estimated contaminant concentrations based on a probability of one excess cancer in a million persons exposed to a chemical over a lifetime. These are also very conservative values designed to protect sensitive members of the population.